TEST REPORT

Applicant:	Tanoshi, Inc.
Address of Applicant:	505 14TH ST STE 900 OAKLAND, CA 94612-1902 OAKLAND CA
Manufacturer/Factory:	Heyuan Vastking Electronic Co.,Ltd
Address of Manufacturer/Factory:	No.13, Hupu Road, PuQian, YuanCheng District, Heyuan, Guangdong.

Equipment Under Test (EUT)

Product Name:	Tablet PC
Model No.:	TTBKB10, TTBKB10-A1V, TTBKB10-A1B
Trade Mark:	Tanoshi
FCC ID:	2AWYT-TTBKB10
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of sample receipt:	Aug. 21, 2020
Date of Test:	Aug. 21, 2020~Sep. 17, 2020
Date of report issued:	Sep. 18, 2020
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	*Sep. 18, 2020*	*Original*

Prepared By:	***Project Engineer***	***Date:***	*Sep. 18, 2020*
Check By:	***Reviewer***	***Date:***	*Sep. 18, 2020*

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4 Test Summary

Test Item	Section	Result
Antenna requirement	FCC part 15.203/15.247 (c) RSS-Gen Section 8.3	Pass
AC Power Line Conducted Emission	FCC part 15.207 RSS-Gen Section 8.8	Pass
Conducted Peak Output Power	FCC part 15.247 (b)(3) RSS-247 Section 5.4(d)	Pass
Channel Bandwidth & 99% OCB	FCC part 15.247 (a)(2) RSS-247 Section 5.2(a) & 6.7	Pass
Power Spectral Density	FCC part 15.247 (e) RSS-247 Section 5.2(b)	Pass
Band Edge	FCC part 15.247(d) RSS-247 Section 5.5	Pass
Spurious Emission	FCC part 15.205/15.209 RSS-Gen Section 3.3 & 8.9 & 8.10	Pass
Frequency stability	RSS-Gen Section 6.11& Section 8.11	PASS

Remark: Test according to ANSI C63.10:2013 and RSS-Gen

Pass: The EUT complies with the essential requirements in the standard.

Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
Radiated Emission	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.			

5 General Information

5.1 General Description of EUT

Product Name:	Tablet PC
Model No.:	TTBKB10, TTBKB10-A1V, TTBKB10-A1B
Serial No.:	N/A
Hardware version:	EM_T6758_V1.0 P4
Software version:	Android 10
Test sample(s) ID:	GTS202009000070-01
Sample(s) Status	Engineer sample
Channel numbers:	802.11b/802.11g /802.11n(HT20): 11 802.11n(HT40):7
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n(HT20)/802.11n(HT40): Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type:	FPCB antenna
Antenna gain:	1.63dBi
Power supply:	JML-0500200NZ-LW INPUT: 100-240V~ 50/60Hz 0.5A OUTPUT: DC 5V 2.0A

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	**Frequency (MHz)**	
	802.11b/802.11g/802.11n(HT20)	802.11n(HT40)
Lowest channel	2412MHz	2422MHz
Middle channel	2437MHz	2437MHz
Highest channel	2462MHz	2452MHz

5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode

Remark: During the test, the dutycycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data. New battery is used during all test.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)
Data rate	1Mbps	6Mbps	6.5Mbps	13Mbps

5.3 Description of Support Units

None.

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

● **IC —Registration No.: 9079A**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A

● **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.7 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.
Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102
Tel: 0755-27798480
Fax: 0755-27798960

5.8 Additional Instructions

Test Software	Special test command provided by manufacturer
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 25 2020	June. 24 2021
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 19 2019	Oct. 18 2020
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 19 2019	Oct. 18 2020
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 19 2019	Oct. 18 2020
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021

Conducted Emission						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 25 2020	June. 24 2021
4	ENV216 2-L-V-NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 25 2020	June. 24 2021
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 25 2020	June. 24 2021
8	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	June. 25 2020	June. 24 2021
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 25 2020	June. 24 2021

RF Conducted Test:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 25 2020	June. 24 2021
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 25 2020	June. 24 2021
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 25 2020	June. 24 2021
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 25 2020	June. 24 2021
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 25 2020	June. 24 2021
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 25 2020	June. 24 2021
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 25 2020	June. 24 2021

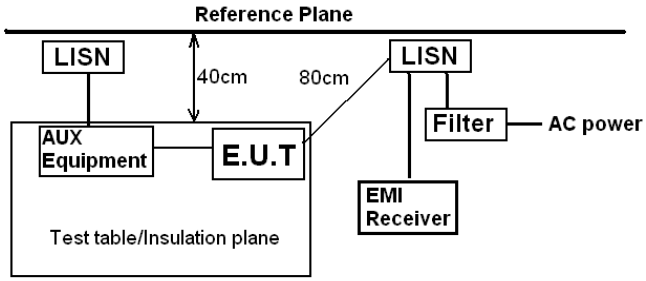
General used equipment:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 25 2020	June. 24 2021
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021

7 Test results and Measurement Data

7.1 Antenna requirement

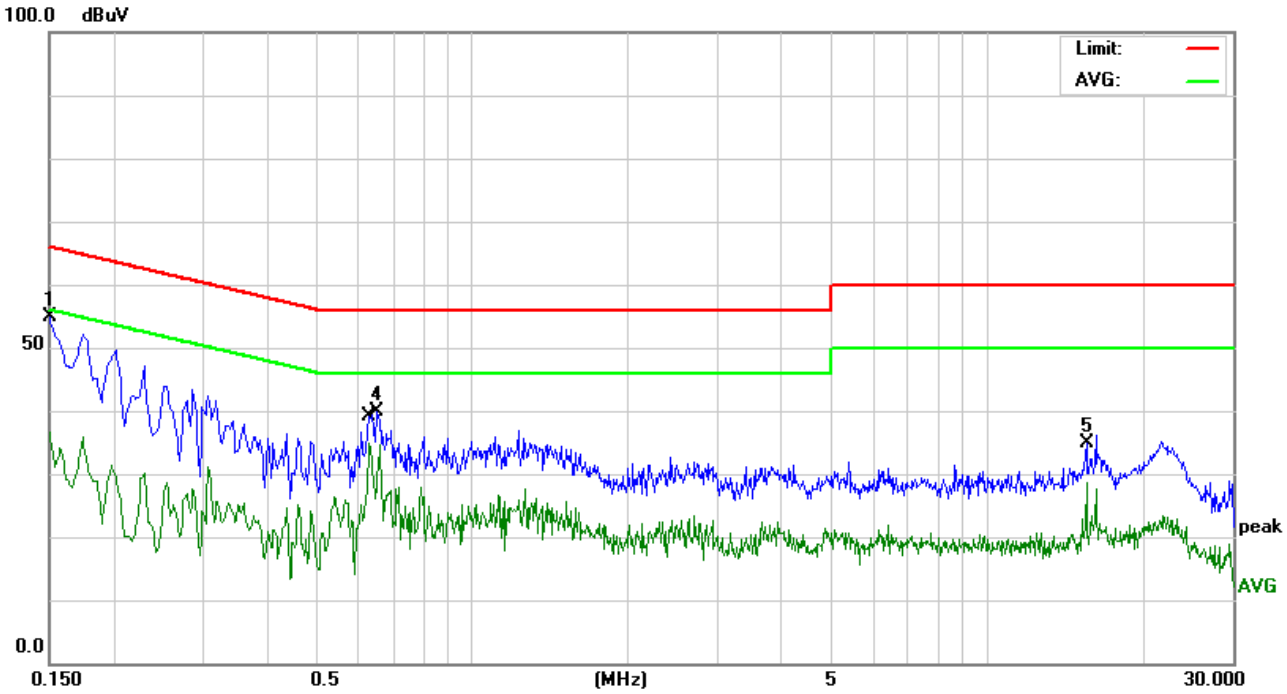
Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. **15.247(c) (1)(i) requirement:** (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
Standard requirement:	RSS-Gen Section 8.3
A transmitter can only be sold or operated with antennas with which it was approved. When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on measurement or on data from the antenna manufacturer. For transmitters of RF output power of 10 milliwatts or less, only the portion of the antenna gain that is in excess of 6 dBi (6 dB above isotropic gain) shall be added to the measured RF output power to demonstrate compliance with the radiated power limits specified in the applicable standard. For transmitters of output power greater than 10 milliwatts, the total antenna gain shall be added to the measured RF output power to demonstrate compliance to the specified radiated power	
EUT Antenna:	
The antenna is FPC antenna, the best case gain of the antenna is 1.63dBi, reference to the appendix II for details	

7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207 RSS-Gen Section 8.8
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto
Limit:	Frequency range (MHz) / Limit (dBuV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 * Decreases with the logarithm of the frequency.
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test environment:	Temp.: 25 °C / Humid.: 52% / Press.: 1012mbar
Test voltage:	AC 120V
Test results:	Pass

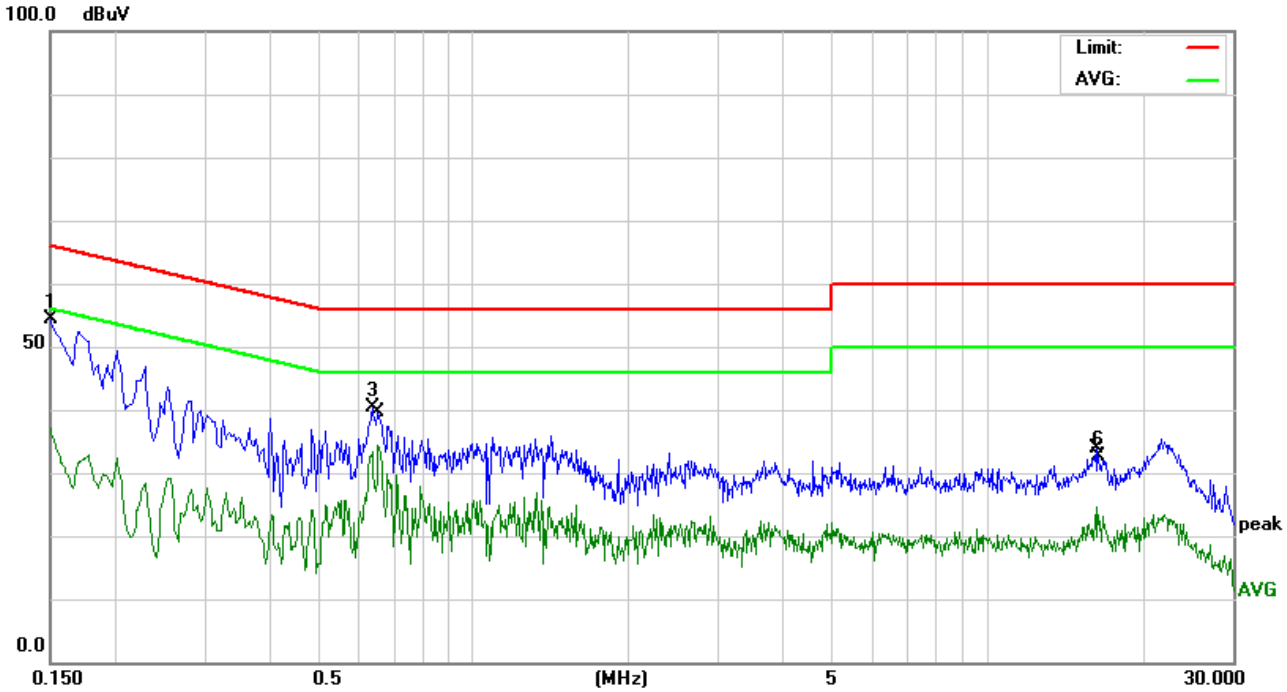
Measurement data

Line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1500	50.80	4.03	54.83	65.99	-11.16	peak
2		0.1500	32.68	4.03	36.71	55.99	-19.28	AVG
3	*	0.6300	24.89	9.96	34.85	46.00	-11.15	AVG
4		0.6540	29.82	9.95	39.77	56.00	-16.23	peak
5		15.6220	33.70	1.30	35.00	60.00	-25.00	peak
6		15.6220	27.42	1.30	28.72	50.00	-21.28	AVG

Neutral:

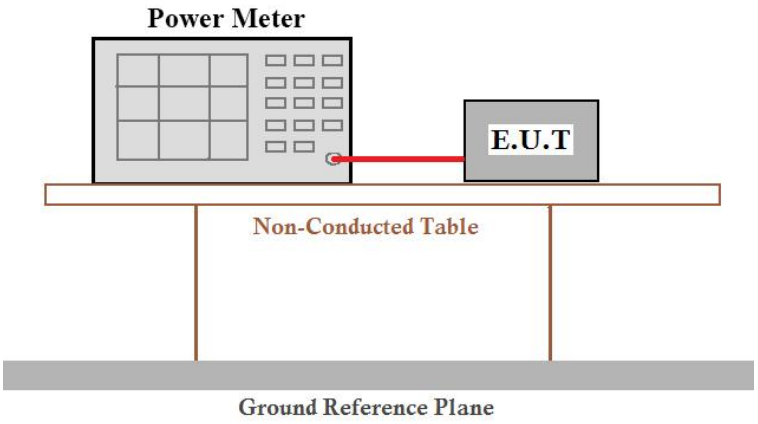


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.1500	50.28	4.03	54.31	65.99	-11.68	peak
2		0.1500	32.98	4.03	37.01	55.99	-18.98	AVG
3		0.6340	30.32	9.96	40.28	56.00	-15.72	peak
4		0.6540	24.35	9.95	34.30	46.00	-11.70	AVG
5		16.2300	23.25	1.36	24.61	50.00	-25.39	AVG
6		16.4140	31.19	1.37	32.56	60.00	-27.44	peak

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss
4. *If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.*

7.3 Conducted Peak Output Power

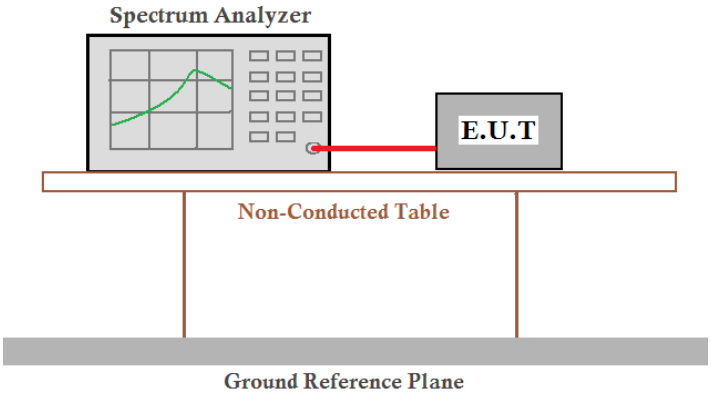
Test Requirement :	FCC Part15 C Section 15.247 (b)(3) RSS-247 Section 5.4(d)
Test Method :	KDB558074 D01 DTS Meas Guidance v05r02 ANSI C63.10:2013 and RSS-Gen
Limit:	30dBm 36dBm(4W for e.i.r.p)
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

Test CH	Peak Output Power (dBm)				Limit(dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	2.22	1.79	1.51	0.81	30.00	Pass
Middle	2.82	1.63	1.42	0.65		
Highest	2.67	1.55	1.32	0.10		

Test CH	e.i.r.p (dBm)				Limit(dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	2.22	1.79	1.51	0.81	36	Pass
Middle	2.82	1.63	1.42	0.65		
Highest	2.67	1.55	1.32	0.10		

7.4 Channel Bandwidth & 99% Occupy Bandwidth

Test Requirement :	FCC Part15 C Section 15.247 (a)(2) RSS-Gen Section 6.7 & RSS-247 Section 5.2(a)
Test Method :	KDB558074 D01 DTS Meas Guidance v05r02 ANSI C63.10:2013 and RSS-Gen
Limit:	>500KHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

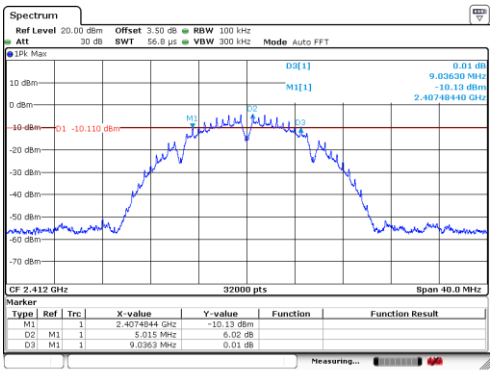
Test CH	Channel Bandwidth (MHz)				Limit(KHz)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	9.0363	16.0563	16.7975	35.1175	>500	Pass
Middle	9.0363	15.7425	16.8013	35.1200		
Highest	9.0338	15.8825	16.9350	35.1225		

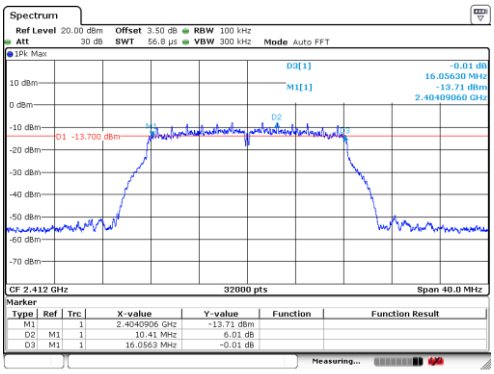
Test CH	99% Occupy Bandwidth (MHz)				Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	
Lowest	13.2925	16.7725	17.7775	36.2425	Pass
Middle	13.2613	16.8825	17.7838	36.3150	
Highest	13.2725	16.9688	17.7175	36.2500	

Test plot as follows:

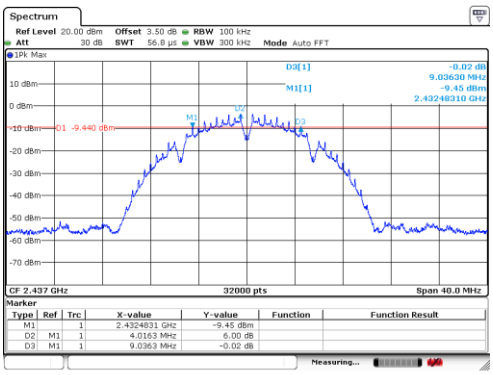
-6dB BW:

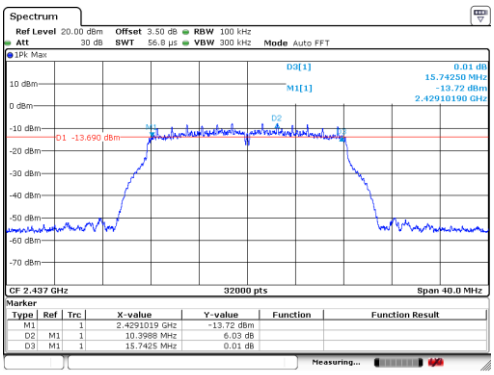
Test mode:	802.11b	Test mode:	802.11g



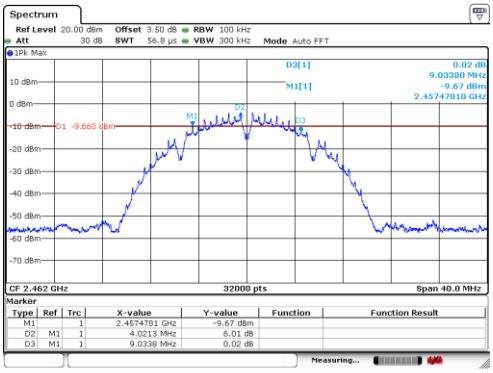


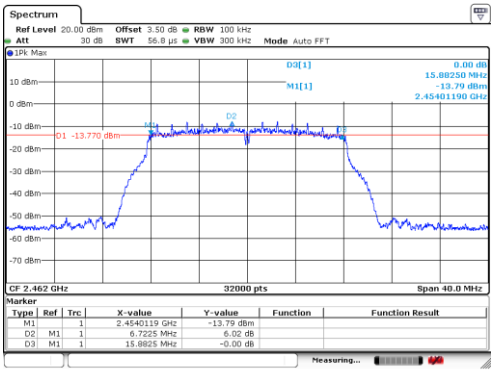
Lowest channel





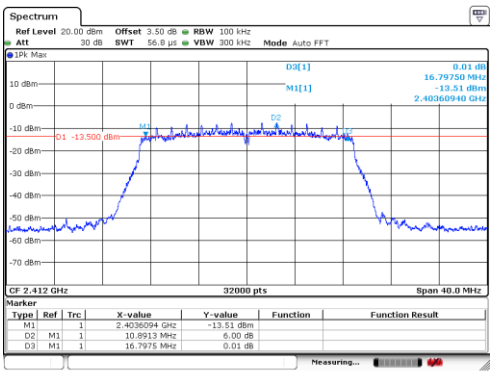
Middle channel

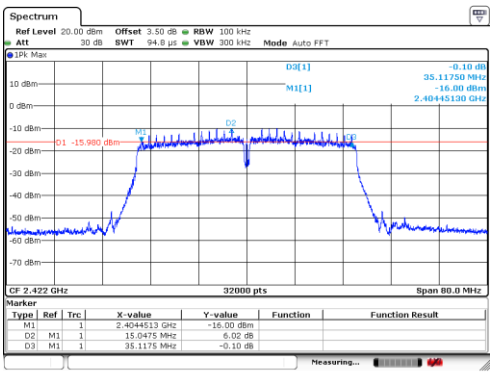




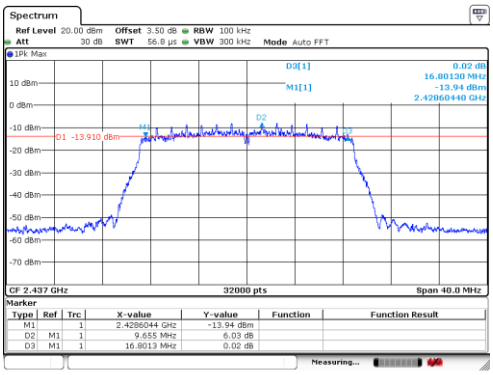
Highest channel

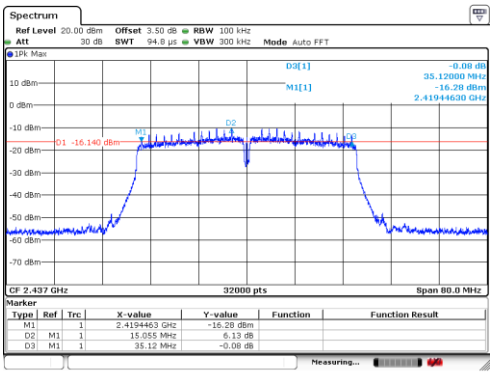
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)



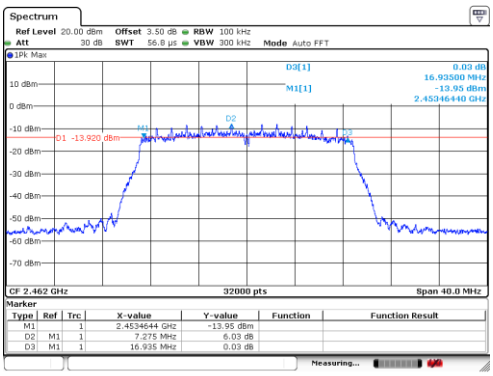


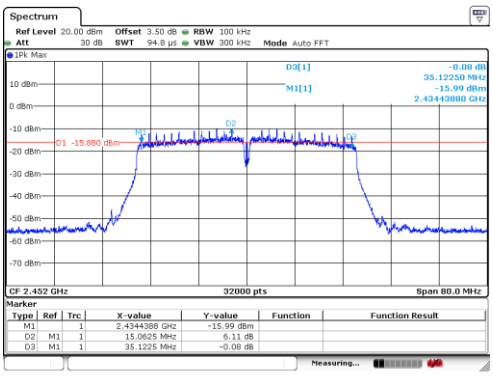
Lowest channel





Middle channel

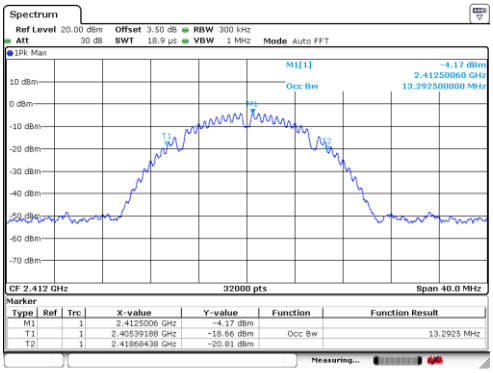


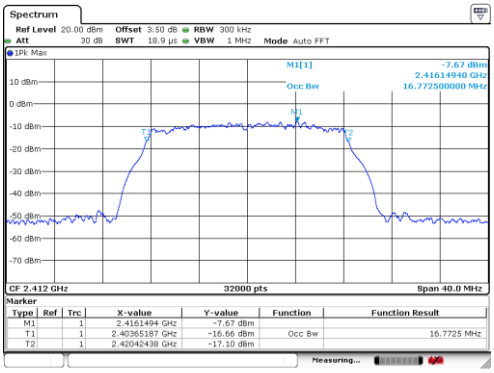


Highest channel

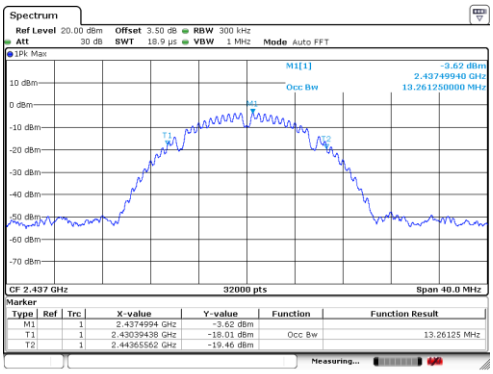
99% BW:

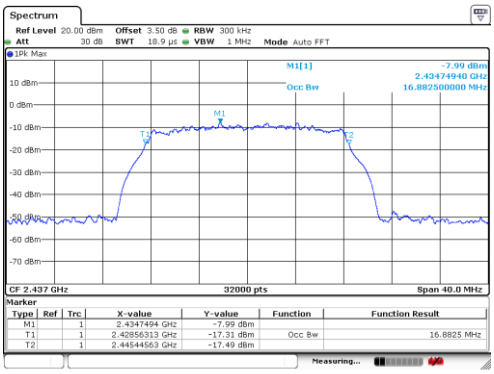
Test mode:	802.11b	Test mode:	802.11g



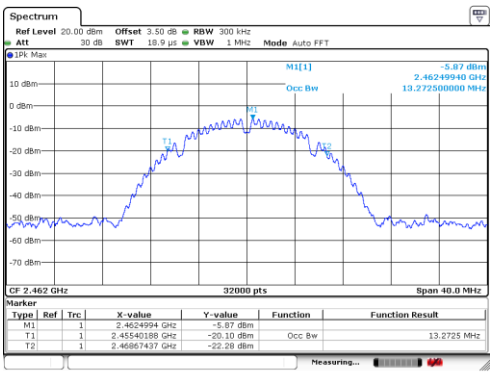


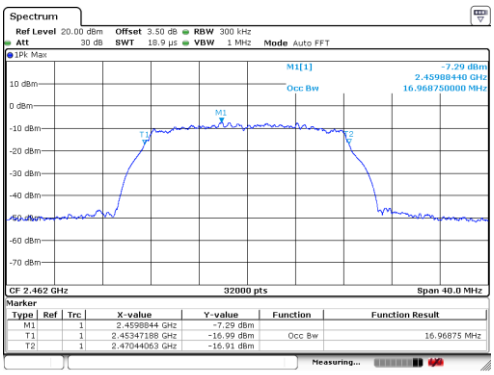
Lowest channel





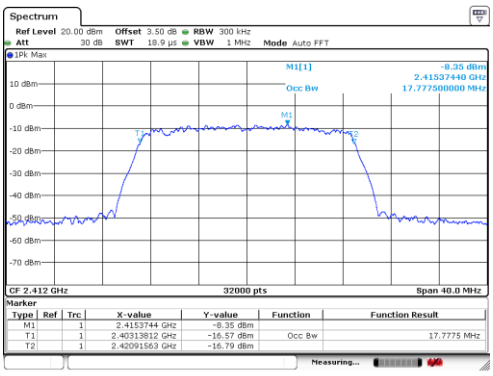
Middle channel

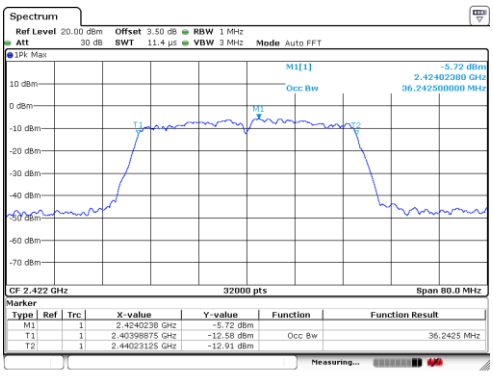




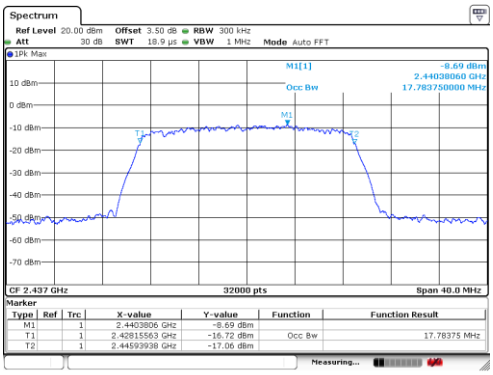
Highest channel

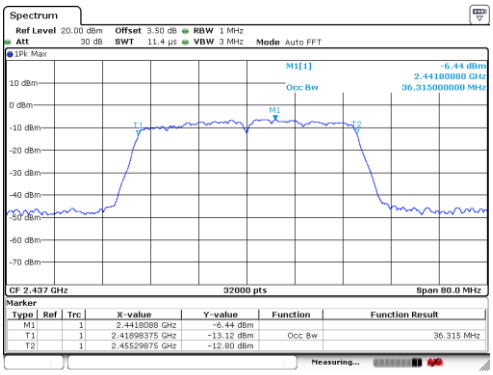
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)



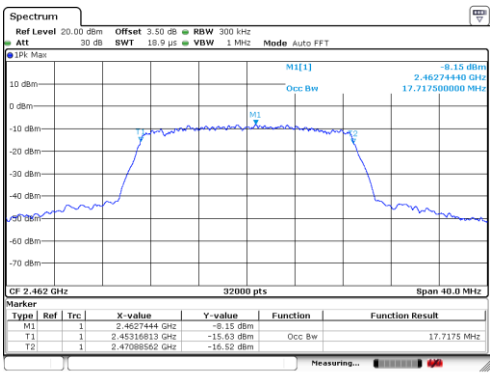


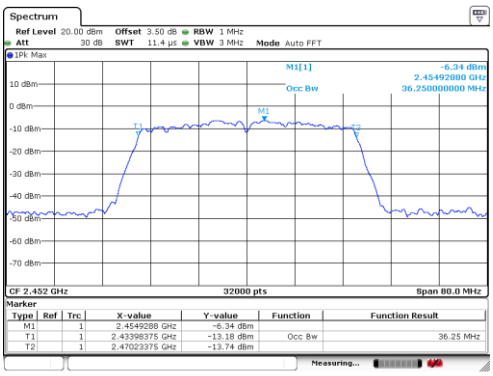
Lowest channel





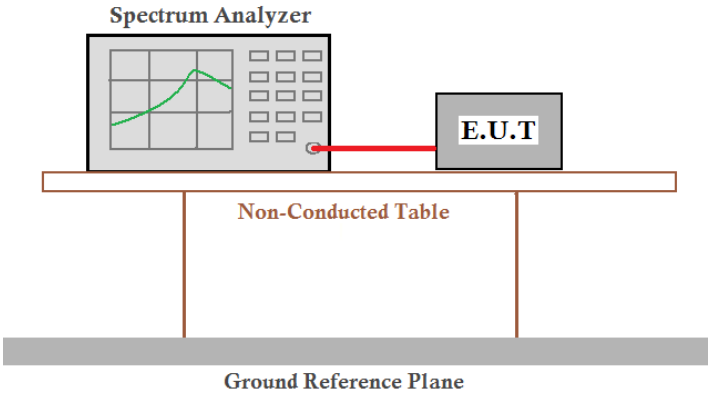
Middle channel





Highest channel

7.5 Power Spectral Density

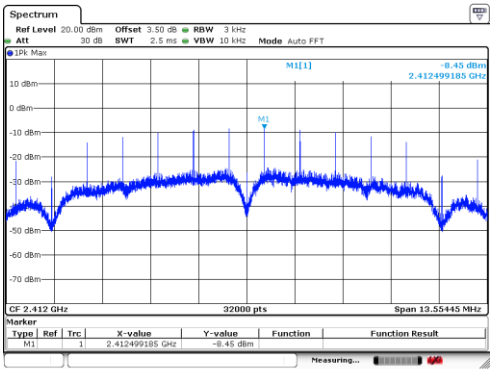
Test Requirement:	FCC Part15 C Section 15.247 (e) RSS-247 Section 5.2(b)
Test Method:	KDB558074 D01 DTS Meas Guidance v05r02 ANSI C63.10:2013 and RSS-Gen
Limit:	8dBm/3kHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

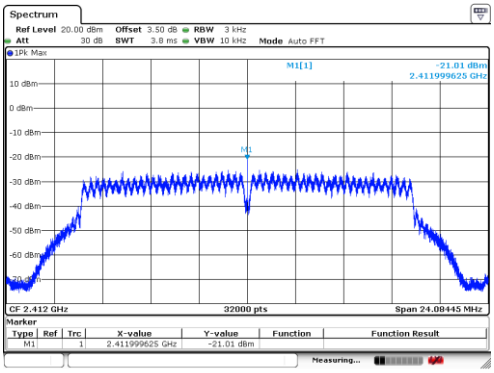
Measurement Data

Test CH	Power Spectral Density (dBm/3kHz)				Limit (dBm/3kHz)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	-8.45	-21.01	-20.97	-20.81	8.00	Pass
Middle	-7.11	-19.73	-19.70	-19.90		
Highest	-5.91	-18.48	-18.32	-19.02		

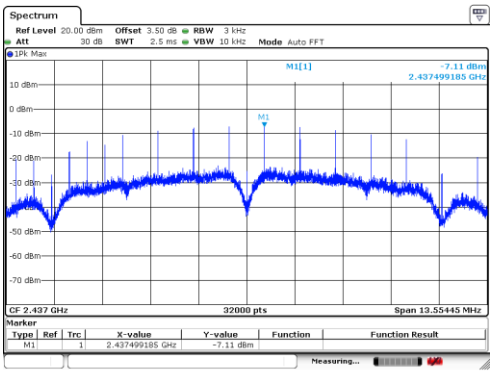
Test plot as follows:

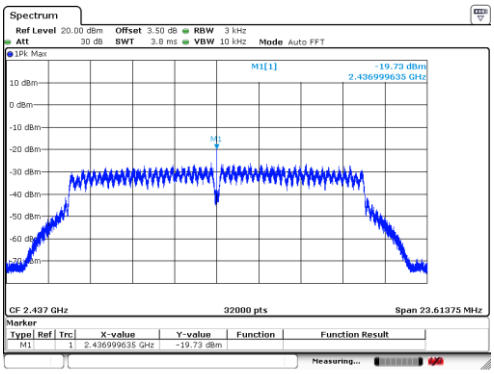
Test mode:	802.11b	Test mode:	802.11g



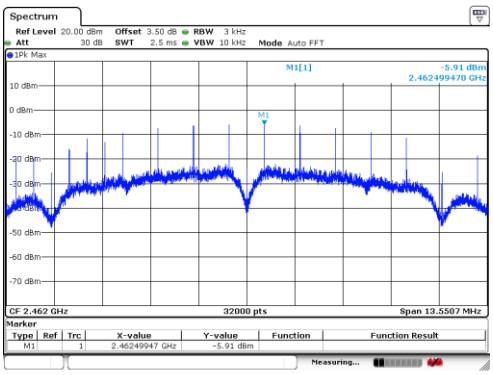


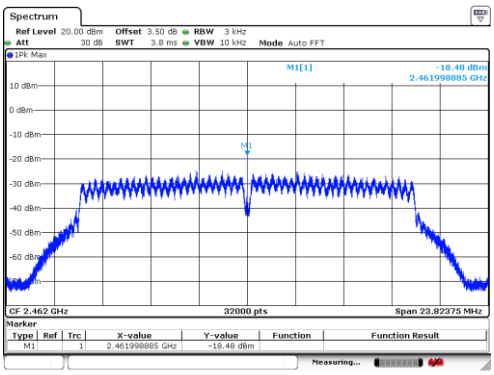
Lowest channel





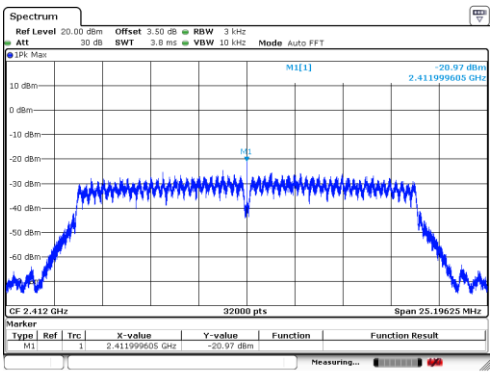
Middle channel

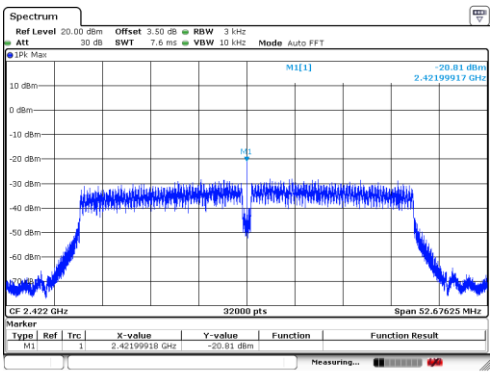




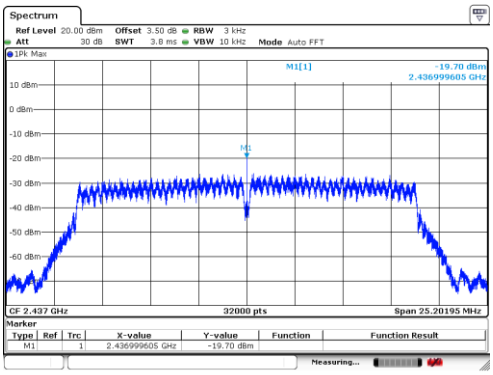
Highest channel

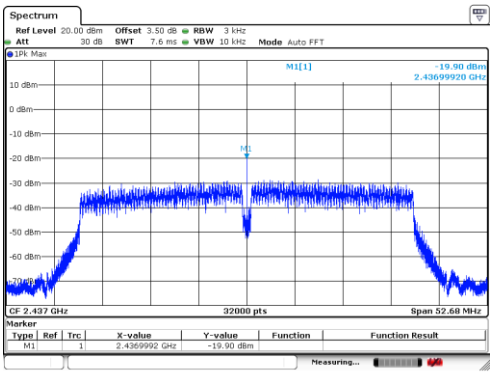
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)



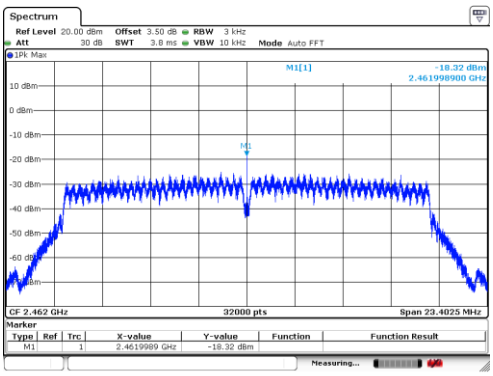


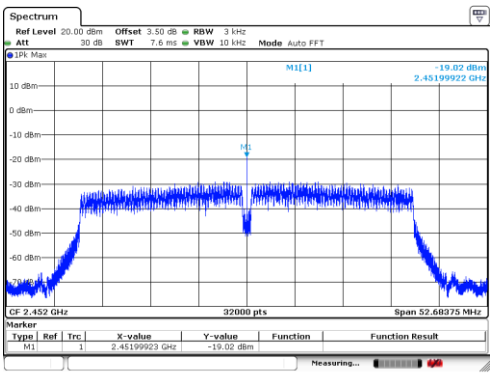
Lowest channel





Middle channel

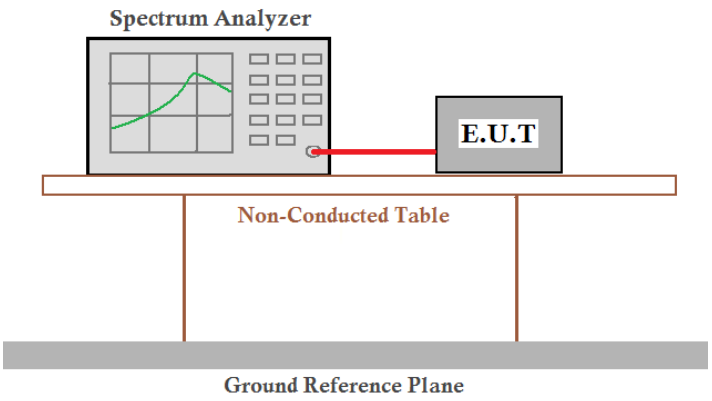




Highest channel

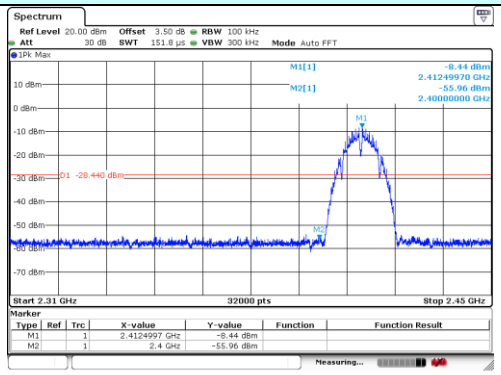
7.6 Band edges

7.6.1 Conducted Emission Method

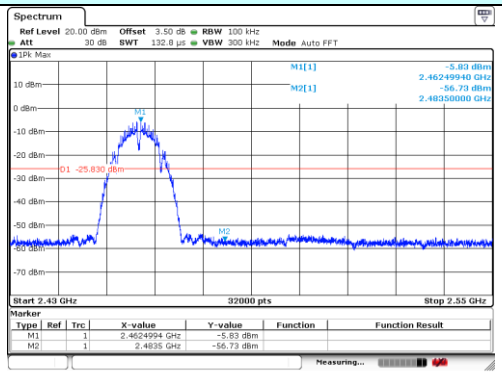
Test Requirement:	FCC Part15 C Section 15.247 (d) RSS-247 Section 5.5
Test Method:	KDB558074 D01 DTS Meas Guidance v05r02 ANSI C63.10:2013 & RSS-Gen
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Test plot as follows:

Test mode:	802.11b

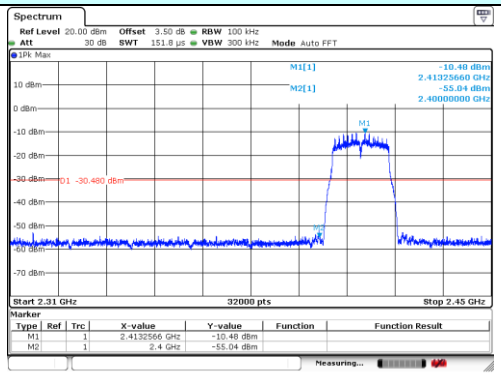


Lowest channel

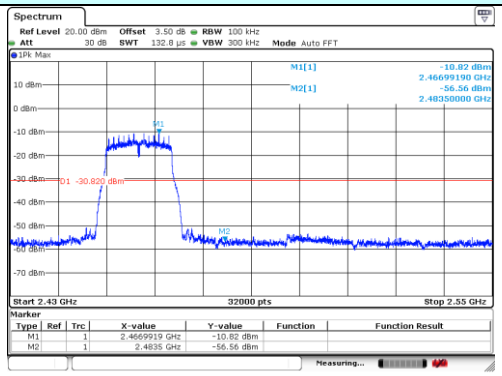


Highest channel

Test mode:	802.11g

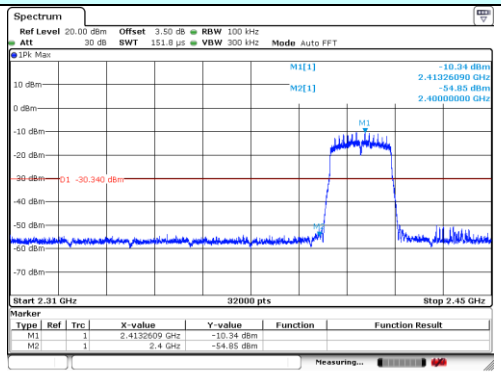


Lowest channel

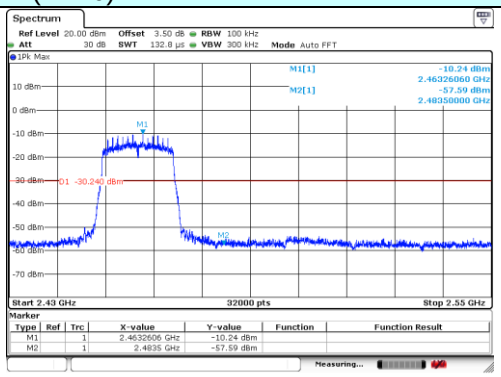


Highest channel

Test mode:	802.11n(HT20)

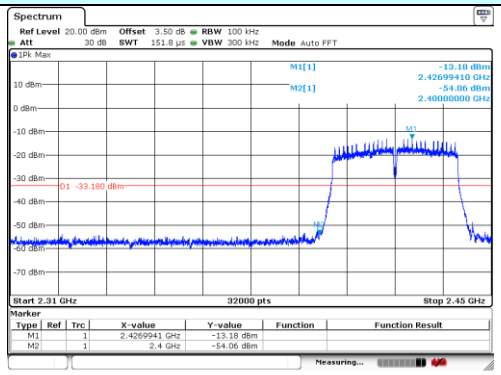


Lowest channel

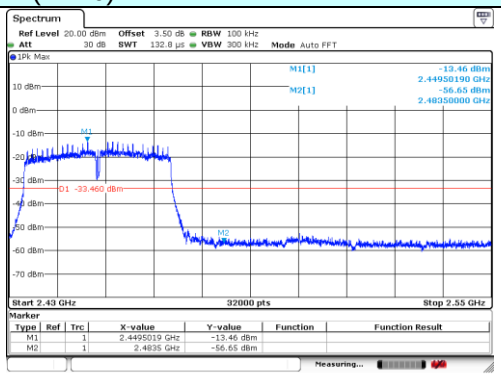


Highest channel

Test mode:	802.11n(HT40)



Lowest channel



Highest channel

7.6.2 Radiated Emission Method

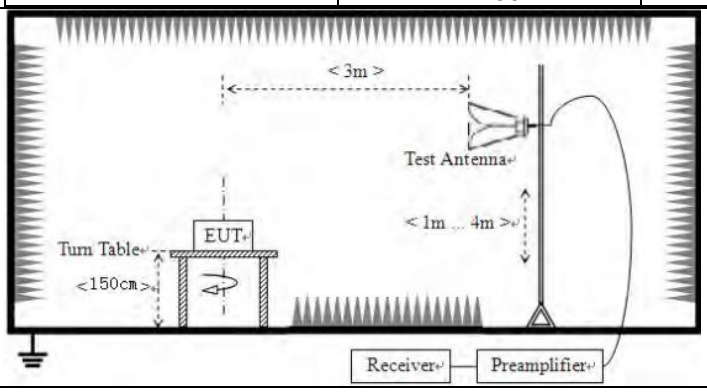
Test Requirement:	FCC Part15 C Section 15.209 and 15.205 RSS-247 3.3 & RSS-Gen Section 8.9
Test Method:	ANSI C63.10: 2013 & RSS-Gen
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
Above 1GHz	Peak	1MHz	3MHz	Peak
	Average	1MHz	3MHz	Average

Limit:

Frequency	Limit (dBuV/m @3m)	Value
Above 1GHz	54.00	Average
	74.00	Peak

Test setup:



Test Procedure:

1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
7. The radiation measurements are performed in X, Y, Z axis positioning. And found the Y axis positioning which it is worse case, only the test worst case mode is recorded in the report.

Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement data:

Test mode:	802.11b	Test channel:	Lowest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	33.26	-5.70	27.56	74.00	-46.44	peak
2400.000	20.55	-5.70	14.85	54.00	-39.15	AVG

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	38.00	-5.70	32.30	74.00	-41.70	peak
2400.000	21.74	-5.70	16.04	54.00	-37.96	AVG

Test mode:	802.11b	Test channel:	Highest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	30.03	-4.98	25.05	74.00	-48.95	peak
2483.500	20.13	-4.98	15.15	54.00	-38.85	AVG

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	30.76	-4.98	25.78	74.00	-48.22	peak
2483.500	21.05	-4.98	16.07	54.00	-37.93	AVG

Test mode:	802.11g	Test channel:	Lowest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	36.61	-5.70	30.91	74.00	-43.09	peak
2400.000	21.06	-5.70	15.36	54.00	-38.64	AVG

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	38.90	-5.70	33.20	74.00	-40.80	peak
2400.000	21.59	-5.70	15.89	54.00	-38.11	AVG

Test mode:	802.11g	Test channel:	Highest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	30.65	-4.98	25.67	74.00	-48.33	peak
2483.500	19.98	-4.98	15.00	54.00	-39.00	AVG

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	31.36	-4.98	26.38	74.00	-47.62	peak
2483.500	20.64	-4.98	15.66	54.00	-38.34	AVG

Test mode:	802.11n(HT20)	Test channel:	Lowest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	34.76	-5.70	29.06	74.00	-44.94	peak
2400.000	20.97	-5.70	15.27	54.00	-38.73	AVG

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	39.04	-5.70	33.34	74.00	-40.66	peak
2400.000	22.03	-5.70	16.33	54.00	-37.67	AVG

Test mode:	802.11n(HT20)	Test channel:	Highest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	30.66	-4.98	25.68	74.00	-48.32	peak
2483.500	20.11	-4.98	15.13	54.00	-38.87	AVG

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	30.02	-4.98	25.04	74.00	-48.96	peak
2483.500	21.15	-4.98	16.17	54.00	-37.83	AVG

Test mode:	802.11n(HT40)	Test channel:	Lowest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	33.15	-5.70	27.45	74.00	-46.55	peak
2400.000	21.37	-5.70	15.67	54.00	-38.33	AVG

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.000	40.05	-5.70	34.35	74.00	-39.65	peak
2400.000	21.85	-5.70	16.15	54.00	-37.85	AVG

Test mode:	802.11n(HT40)	Test channel:	Highest

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	30.58	-4.98	25.60	74.00	-48.40	peak
2483.565	19.07	-4.98	14.09	54.00	-39.91	AVG

Horizontal:

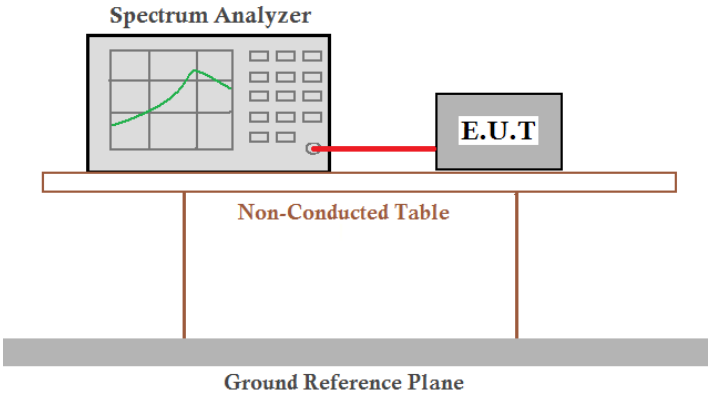
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	31.68	-4.98	26.70	74.00	-47.30	peak
2483.500	20.94	-4.98	15.96	54.00	-38.04	AVG

Remarks:

1. *Only the worst case Main Antenna test data.*
2. *The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.*
3. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
4. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

7.7 Spurious Emission

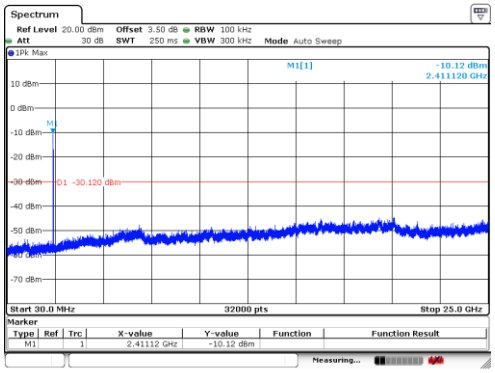
7.7.1 Conducted Emission Method

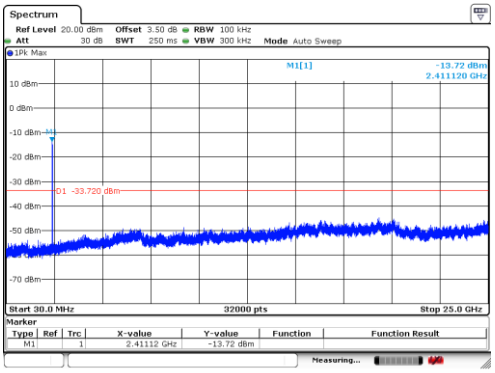
Test Requirement:	FCC Part15 C Section 15.247 (d) RSS-247 Section 5.5
Test Method:	KDB558074 D01 DTS Meas Guidance v05r02 ANSI C63.10:2013 & RSS-Gen
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Test plot as follows:

Test mode:	802.11b	Test mode:	802.11g

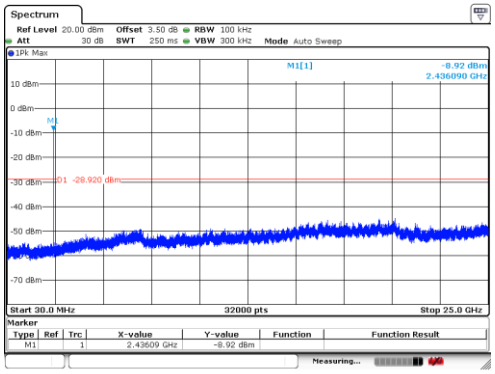
Lowest channel

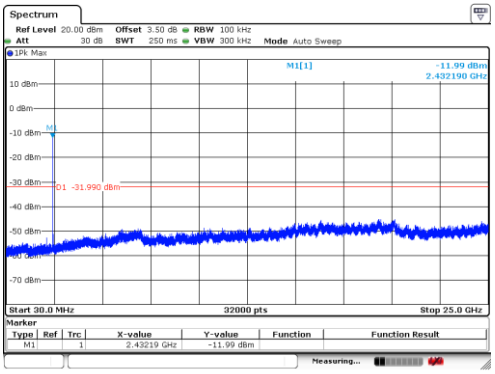




30MHz~25GHz

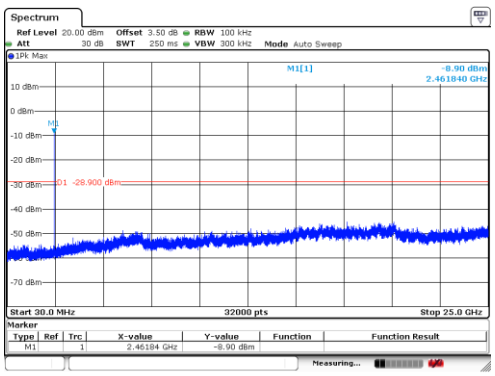
Middle channel

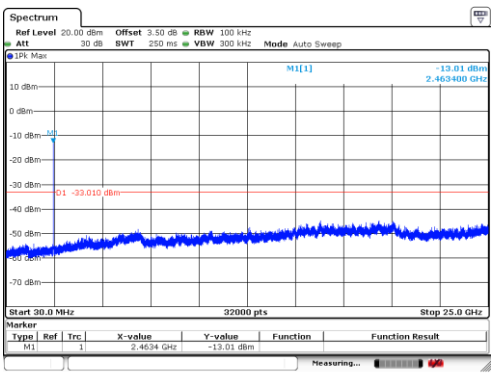




30MHz~25GHz

Highest channel

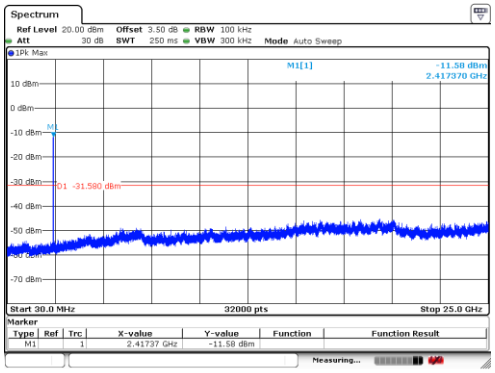


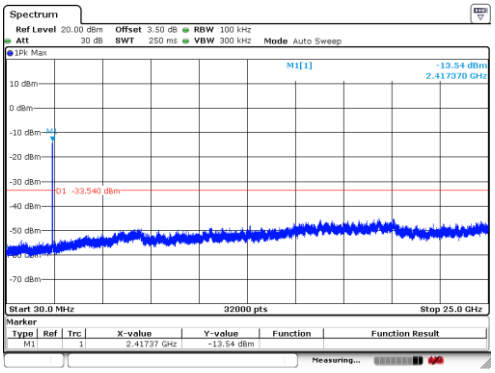


30MHz~25GHz

Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)

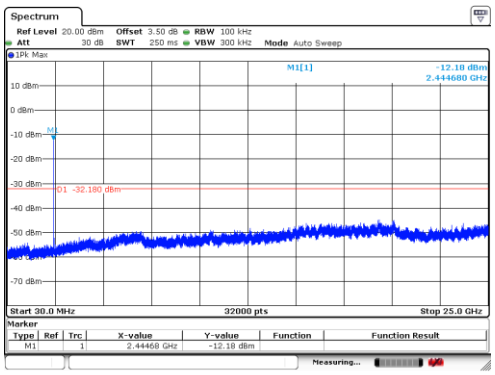
Lowest channel

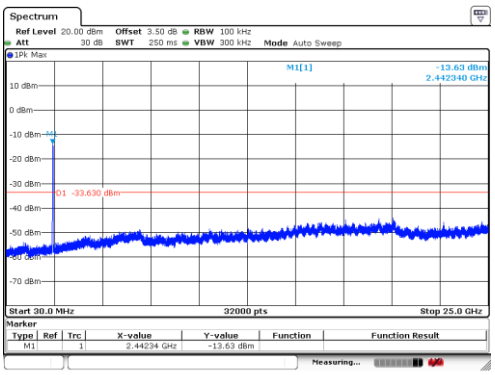




30MHz~25GHz

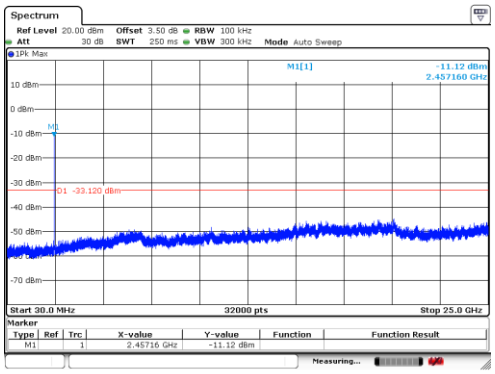
Middle channel

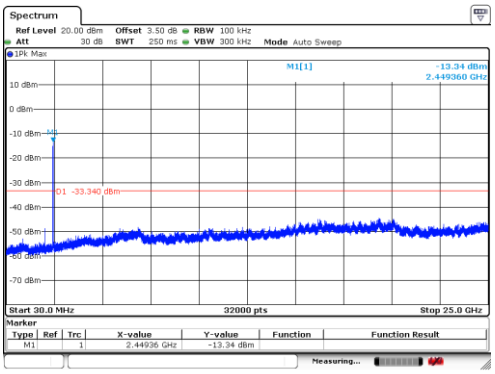




30MHz~25GHz

Highest channel





30MHz~25GHz

7.7.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 RSS-247 Section 3.3 & RSS-Gen Section 8.9
Test Method:	ANSI C63.10: 2013 & RSS-Gen
Test Frequency Range:	9kHz to 25GHz
Test site:	Measurement Distance: 3m

Receiver setup:

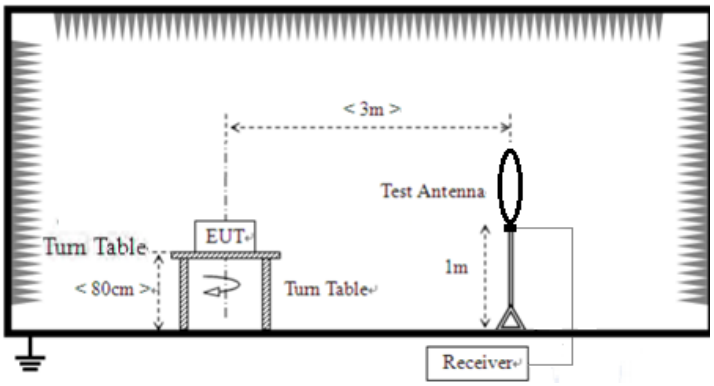
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Limit:

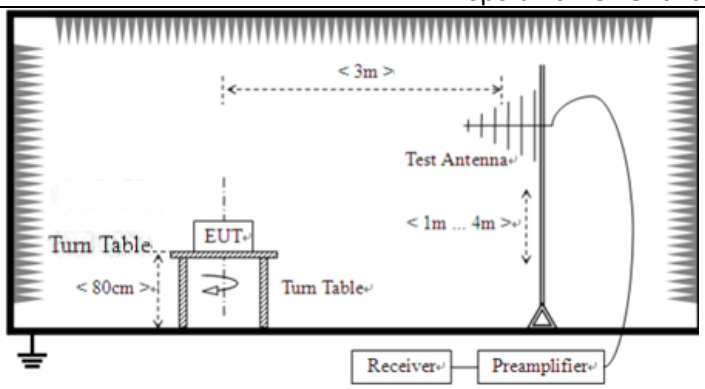
Frequency	Limit (uV/m)	Value	Measurement Distance
0.009MHz-0.490MHz	2400/F(KHz)	QP	300m
0.490MHz-1.705MHz	24000/F(KHz)	QP	300m
1.705MHz-30MHz	30	QP	30m
30MHz-88MHz	100	QP	3m
88MHz-216MHz	150	QP	
216MHz-960MHz	200	QP	
960MHz-1GHz	500	QP	
Above 1GHz	500	Average	
	5000	Peak	

Test setup:

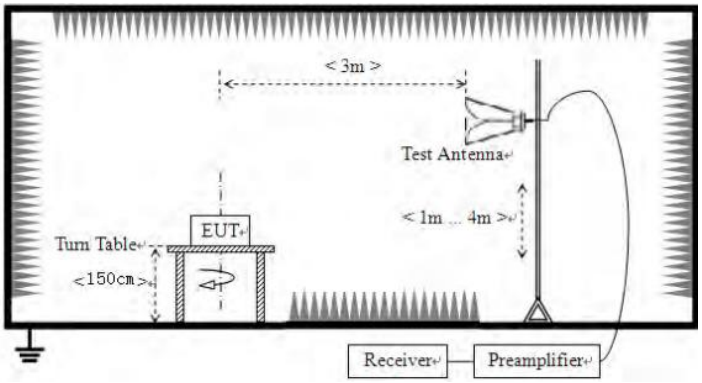
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



Test Procedure:	1. The EUT was placed on the top of a rotating table (0.8m for below 1G and 1.5m for above 1G) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 6.0 for details

Test mode:	Refer to section 5.2 for details					
Test voltage:	AC120V 60Hz					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

Remarks:

1. *Only the worst case Main Antenna test data.*
2. *Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.*

Measurement data:

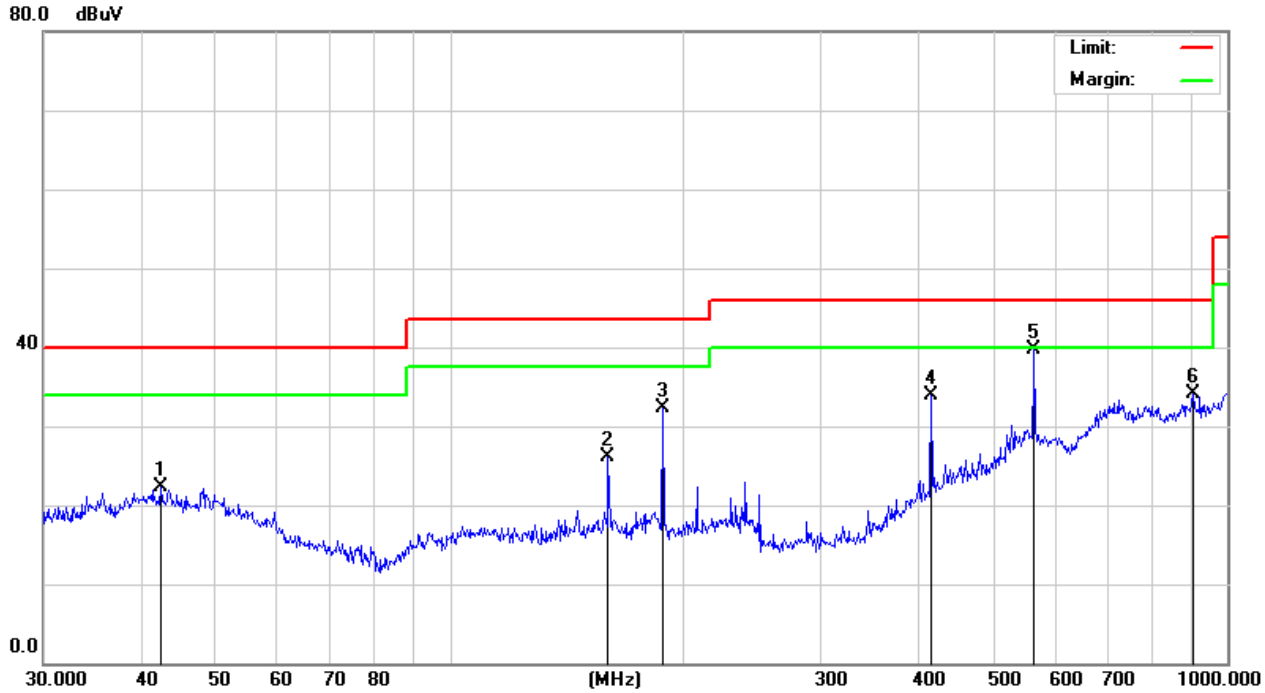
■ **9kHz~30MHz**

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

■ **Below 1GHz**

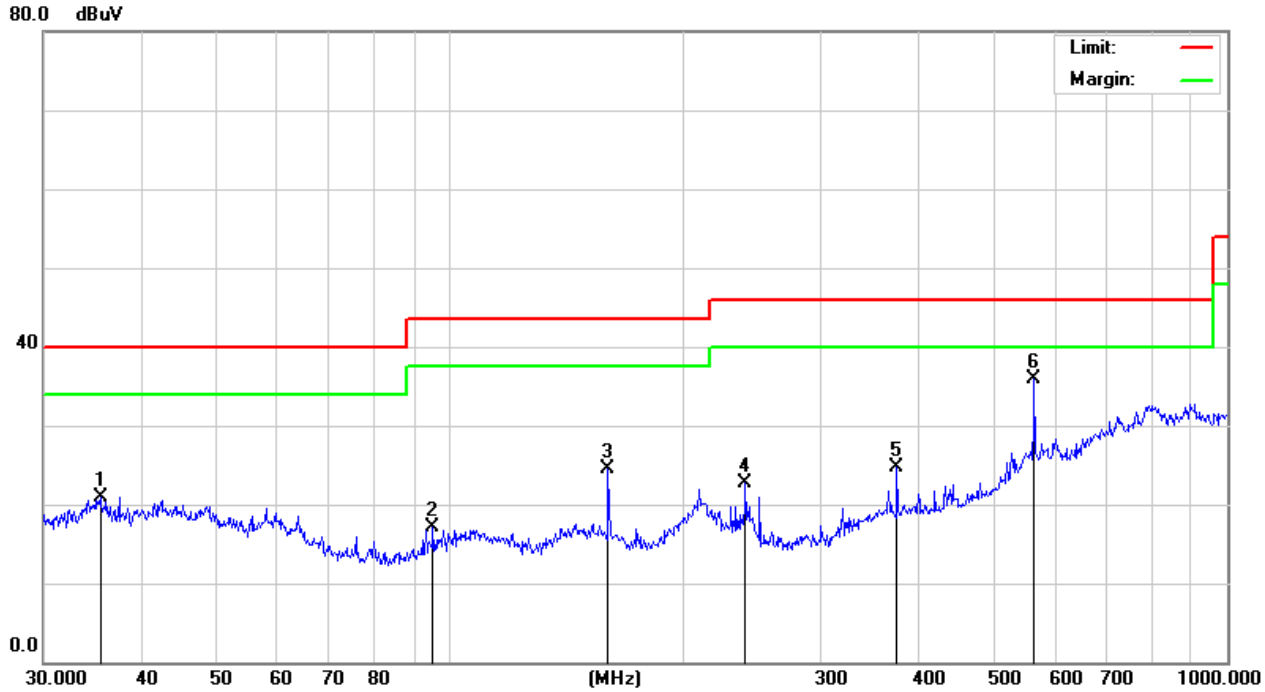
Pre-scan all test modes, found worst case at 802.11b 2462MHz, and so only show the test result of 802.11b 2462MHz

Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		42.4508	24.34	-1.94	22.40	40.00	-17.60	peak
2		159.7844	32.56	-6.54	26.02	43.50	-17.48	peak
3		187.7530	39.22	-6.85	32.37	43.50	-11.13	peak
4		416.1791	35.64	-1.79	33.85	46.00	-12.15	peak
5	*	564.6389	35.32	4.38	39.70	46.00	-6.30	peak
6		903.3094	26.56	7.51	34.07	46.00	-11.93	peak

Vertical:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		35.4992	25.59	-4.74	20.85	40.00	-19.15	peak
2		95.0930	26.77	-9.71	17.06	43.50	-26.44	peak
3		159.7844	33.09	-8.61	24.48	43.50	-19.02	peak
4		239.9874	29.21	-6.52	22.69	46.00	-23.31	peak
5		375.9384	29.13	-4.40	24.73	46.00	-21.27	peak
6	*	564.6389	34.04	1.77	35.81	46.00	-10.19	peak

■ **Above 1GHz**

Test mode:	802.11b	Test channel:	Lowest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.000	44.23	5.08	49.31	74.00	-24.69	PEAK
4824.000	30.70	5.08	35.78	54.00	-18.22	AVG
7326.000	40.98	7.55	48.53	74.00	-25.47	PEAK
7326.000	28.61	7.55	36.16	54.00	-17.84	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.000	44.72	5.08	49.80	74.00	-24.20	PEAK
4824.000	31.20	5.08	36.28	54.00	-17.72	AVG
7236.000	42.56	7.16	49.72	74.00	-24.28	PEAK
7236.000	29.51	7.16	36.67	54.00	-17.33	AVG

Test mode:	802.11b	Test channel:	Middle

H

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.000	44.75	5.13	49.88	74.00	-24.12	PEAK
4874.000	29.54	5.13	34.67	54.00	-19.33	AVG
7311.000	41.22	7.49	48.71	74.00	-25.29	PEAK
7311.000	27.31	7.49	34.80	54.00	-19.20	AVG

V

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.000	43.36	5.13	48.49	74.00	-25.51	PEAK
4874.000	30.38	5.13	35.51	54.00	-18.49	AVG
7311.000	41.01	7.49	48.50	74.00	-25.50	PEAK
7311.000	27.54	7.49	35.03	54.00	-18.97	AVG

Test mode:	802.11b	Test channel:	Highest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924.000	43.15	5.18	48.33	74.00	-25.67	PEAK
4924.000	31.05	5.18	36.23	54.00	-17.77	AVG
7386.000	40.87	7.82	48.69	74.00	-25.31	PEAK
7386.000	29.12	7.82	36.94	54.00	-17.06	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924.000	44.54	5.18	49.72	74.00	-24.28	PEAK
4924.000	31.25	5.18	36.43	54.00	-17.57	AVG
7386.000	41.24	7.82	49.06	74.00	-24.94	PEAK
7386.000	27.54	7.82	35.36	54.00	-18.64	AVG

Test mode:	802.11g	Test channel:	lowest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.000	43.96	5.08	49.04	74.00	-24.96	PEAK
4824.000	30.31	5.08	35.39	54.00	-18.61	AVG
7326.000	41.06	7.55	48.61	74.00	-25.39	PEAK
7326.000	27.34	7.55	34.89	54.00	-19.11	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.000	43.24	5.08	48.32	74.00	-25.68	PEAK
4824.000	30.11	5.08	35.19	54.00	-18.81	AVG
7236.000	40.99	7.16	48.15	74.00	-25.85	PEAK
7236.000	27.36	7.16	34.52	54.00	-19.48	AVG

Test mode:	802.11g	Test channel:	Middle

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874.000	43.25	5.13	48.38	74.00	-25.62	PEAK
4874.000	29.36	5.13	34.49	54.00	-19.51	AVG
7311.000	40.13	7.49	47.62	74.00	-26.38	PEAK
7311.000	27.16	7.49	34.65	54.00	-19.35	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874.000	43.31	5.13	48.44	74.00	-25.56	PEAK
4874.000	29.06	5.13	34.19	54.00	-19.81	AVG
7311.000	40.12	7.49	47.61	74.00	-26.39	PEAK
7311.000	27.07	7.49	34.56	54.00	-19.44	AVG

Test mode:	802.11g	Test channel:	Highest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (Db)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (Db)	Detector Type
4924.000	43.15	5.18	48.33	74.00	-25.67	PEAK
4924.000	30.19	5.18	35.37	54.00	-18.63	AVG
7386.000	39.98	7.82	47.80	74.00	-26.20	PEAK
7386.000	27.05	7.82	34.87	54.00	-19.13	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924.000	43.22	5.18	48.40	74.00	-25.60	PEAK
4924.000	30.36	5.18	35.54	54.00	-18.46	AVG
7386.000	40.19	7.82	48.01	74.00	-25.99	PEAK
7386.000	27.23	7.82	35.05	54.00	-18.95	AVG

Test mode:	802.11n(HT20)	Test channel:	Lowest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.000	43.39	5.08	48.47	74.00	-25.53	PEAK
4824.000	30.18	5.08	35.26	54.00	-18.74	AVG
7326.000	40.19	7.55	47.74	74.00	-26.26	PEAK
7326.000	27.31	7.55	34.86	54.00	-19.14	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824.000	43.54	5.08	48.62	74.00	-25.38	PEAK
4824.000	30.02	5.08	35.10	54.00	-18.90	AVG
7236.000	41.02	7.16	48.18	74.00	-25.82	PEAK
7236.000	27.34	7.16	34.50	54.00	-19.50	AVG

Test mode:	802.11n(HT20)	Test channel:	Middle

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874.000	42.91	5.13	48.04	74.00	-25.96	PEAK
4874.000	29.39	5.13	34.52	54.00	-19.48	AVG
7311.000	40.05	7.49	47.54	74.00	-26.46	PEAK
7311.000	26.99	7.49	34.48	54.00	-19.52	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874.000	43.31	5.13	48.44	74.00	-25.56	PEAK
4874.000	29.55	5.13	34.68	54.00	-19.32	AVG
7311.000	40.09	7.49	47.58	74.00	-26.42	PEAK
7311.000	27.31	7.49	34.80	54.00	-19.20	AVG

Test mode:	802.11n(HT20)	Test channel:	Highest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924.000	43.16	5.18	48.34	74.00	-25.66	PEAK
4924.000	30.64	5.18	35.82	54.00	-18.18	AVG
7386.000	40.15	7.82	47.97	74.00	-26.03	PEAK
7386.000	27.33	7.82	35.15	54.00	-18.85	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924.000	43.28	5.18	48.46	74.00	-25.54	PEAK
4924.000	30.35	5.18	35.53	54.00	-18.47	AVG
7386.000	40.56	7.82	48.38	74.00	-25.62	PEAK
7386.000	27.11	7.82	34.93	54.00	-19.07	AVG

Test mode:	802.11n(HT40)	Test channel:	Lowest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4844.000	43.35	5.11	48.46	74.00	-25.54	PEAK
4844.000	29.48	5.11	34.59	54.00	-19.41	AVG
7266.000	40.34	7.29	47.63	74.00	-26.37	PEAK
7266.000	27.16	7.29	34.45	54.00	-19.55	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4844.000	43.58	5.11	48.69	74.00	-25.31	PEAK
4844.000	29.08	5.11	34.19	54.00	-19.81	AVG
7266.000	40.17	7.29	47.46	74.00	-26.54	PEAK
7266.000	27.16	7.29	34.45	54.00	-19.55	AVG

Test mode:	802.11n(HT40)	Test channel:	Middle

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874.000	43.67	5.13	48.80	74.00	-25.20	PEAK
4874.000	30.15	5.13	35.28	54.00	-18.72	AVG
7311.000	40.55	7.49	48.04	74.00	-25.96	PEAK
7311.000	27.02	7.49	34.51	54.00	-19.49	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4874.000	43.15	5.13	48.28	74.00	-25.72	PEAK
4874.000	29.97	5.13	35.10	54.00	-18.90	AVG
7311.000	40.54	7.49	48.03	74.00	-25.97	PEAK
7311.000	27.64	7.49	35.13	54.00	-18.87	AVG

Test mode:	802.11n(HT40)	Test channel:	Highest

H

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4904.000	43.89	5.16	49.05	74.00	-24.95	peak
4904.000	30.68	5.16	35.84	54.00	-18.16	AVG
7356.000	40.64	7.69	48.33	74.00	-25.67	peak
7356.000	27.66	7.69	35.35	54.00	-18.65	AVG

V

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4904.000	43.07	5.16	48.23	74.00	-25.77	peak
4904.000	30.38	5.16	35.54	54.00	-18.46	AVG
7356.000	40.06	7.69	47.75	74.00	-26.25	peak
7356.000	27.34	7.69	35.03	54.00	-18.97	AVG

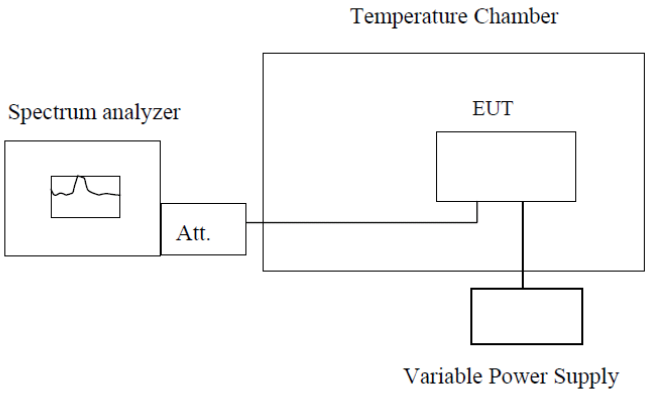
Remark:

1 Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

2 "", means this data is the too weak instrument of signal is unable to test.*

3. The emission levels of other frequencies are very lower than the limit and not show in test report.

7.8 Frequency stability

Test Requirement:	RSS-Gen Section 6.11& Section 8.11
Test Method:	ANSI C63.10: 2013 & RSS-Gen
Limit:	Manufactures of devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified
Test Procedure:	The EUT was setup to ANSI C63.10, 2013; tested to 2.1055 for compliance to RSS-Gen requirements.
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Remark: Set the EUT transmits at un-modulation mode to test frequency stability.

Measurement data:

Frequency stability versus Temp.						
Power Supply: DC 3.85V						
Temp. (°C)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)	Pass /Fail
-30	2412	2412.0189	2411.9917	2412.0935	2412.0533	Pass
	2437	2436.9382	2437.0811	2436.9365	2437.0784	Pass
	2452	2452.0972	2452.0175	2452.0567	2451.9927	Pass
	2462	2461.9679	2462.0420	2462.0058	2461.9969	Pass
-20	2412	2412.1008	2412.0542	2412.0522	2411.9722	Pass
	2437	2436.9260	2437.0344	2437.0517	2437.0066	Pass
	2452	2451.9830	2452.0019	2451.9816	2451.9969	Pass
	2462	2461.9783	2461.9547	2462.0339	2462.0353	Pass
-10	2412	2411.9553	2412.0997	2411.9741	2412.1004	Pass
	2437	2437.0823	2437.0312	2436.9772	2437.0182	Pass
	2452	2452.0558	2451.9420	2452.0009	2452.0649	Pass
	2462	2461.9662	2462.0838	2462.0904	2462.0398	Pass
0	2412	2412.0693	2412.0276	2411.9899	2411.9318	Pass
	2437	2437.0754	2436.9895	2436.9170	2437.0445	Pass
	2452	2452.0096	2451.9344	2452.0165	2451.9856	Pass
	2462	2461.9101	2461.9956	2462.0430	2462.0106	Pass
10	2412	2411.9552	2411.9291	2412.0871	2412.0136	Pass
	2437	2437.0381	2436.9755	2436.9676	2436.9723	Pass
	2452	2451.9675	2452.0037	2452.0551	2452.0740	Pass
	2462	2461.9288	2462.0100	2461.9037	2462.0269	Pass
20	2412	2412.0951	2412.0504	2412.0350	2412.0970	Pass
	2437	2437.0121	2436.9707	2436.9874	2436.9127	Pass
	2452	2452.0158	2451.9730	2451.9343	2452.0327	Pass
	2462	2462.0173	2461.9803	2462.0728	2462.0522	Pass
30	2412	2411.9224	2411.9851	2411.9887	2412.0799	Pass
	2437	2436.9194	2436.9063	2437.0795	2436.9985	Pass
	2452	2452.0135	2451.9282	2451.9429	2451.9245	Pass
	2462	2461.9845	2462.0543	2462.0590	2461.9834	Pass
40	2412	2411.9639	2412.0861	2412.0630	2412.0306	Pass
	2437	2437.0662	2437.0517	2437.0255	2436.9241	Pass
	2452	2452.0277	2451.9841	2451.9530	2451.9366	Pass
	2462	2462.0496	2462.0025	2461.9116	2461.9477	Pass
50	2412	2411.9231	2412.0415	2412.0564	2411.9110	Pass
	2437	2436.9434	2437.0689	2437.0023	2436.9381	Pass
	2452	2451.9392	2452.0436	2451.9822	2451.9440	Pass
	2462	2461.9924	2462.0470	2461.9671	2461.9883	Pass

Frequency stability versus Voltage						
Temperature: 25°C						
Power Supply (VDC)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute	Pass /Fail
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	
3.6	2412	2412.0289	2412.1297	2412.3942	2412.3264	Pass
	2437	2437.0576	5199.9288	5199.6672	5199.9628	Pass
	2452	2452.1585	2452.6731	5219.8848	2452.1270	Pass
	2462	2462.9439	2462.8619	5239.9706	5239.4340	Pass
4.4	2412	5181.2093	2412.0896	5179.1654	5179.1249	Pass
	2437	2437.1292	2437.2412	5199.9557	5199.2257	Pass
	2452	2452.2773	2452.2947	5219.8907	5219.5153	Pass
	2462	5239.7530	2462.7048	5239.0745	5239.6018	Pass

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

------End------